



United States Department of the Interior



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RETURN RECEIPT REQUESTED

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DECISION

PROTEST DISMISSED

I. INTRODUCTION

On September 13, 2017, a Lease Sale Notice for the Miles City Field Office (MCFO), December 12, 2017, Competitive Oil and Gas Lease Sale was posted, which initiated a 30-day protest period. At the same time, the MCFO Oil and Gas Leasing Environmental Assessment (EA), updated after a 30-day public comment period, was made available to the public.

In a fax to the Bureau of Land Management (BLM) dated October 16, 2017 (Enclosure 1), the WildEarth Guardians (WEG) and Montana Environmental Information Center (MEIC) submitted a timely protest to the inclusion of 204 parcels located in the MCFO planning area, Montana.

II. BACKGROUND

Public scoping for this lease sale was conducted from May 16-30, 2017. This scoping period was announced in a press release issued by the Montana State Office. The MCFO also posted National Environmental Policy Act (NEPA) notification log, reference number DOI-BLM-MT-C020-2017-0051-EA. In addition, the Montana State Office mailed surface owner notification letters explaining the oil and gas leasing and planning processes. The letters requested written comments regarding any issues or concerns that should be addressed in the EA being prepared for the parcel. The MCFO received a total of five (5) substantive scoping

comments regarding the leasing process, split estate, and water resources. No comments were received from WEG or MEIC at that time.

On July 10, 2017, the BLM Montana/Dakotas released the MCFO Oil and Gas Leasing EA for a 30-day public comment period. The EA analyzed the potential effects from offering 204 nominated lease parcels in Montana containing 98,889 acres of Federal Mineral Estate in the December 12, 2017, Competitive Oil and Gas Lease Sale. Relevant public comments received during this process were addressed in the EA, as appropriate. WEG submitted comments on the EA at that time. MEIC did not. The EA was updated and posted, along with the competitive sale list, on September 13, 2017, on the BLM's ePlanning website for a 30-day protest period.

After a review of potential environmental impacts presented in the EA and the public comments, the Miles City Field Manager recommended that 204 parcels be included in the December 12, 2017 lease sale. As a result of the Decision Record, a total of 204 nominated MCFO lease parcels (98,889 acres of Federal minerals) would be offered for lease at the MCFO, December 12, 2017, Competitive Oil and Gas Sale with lease stipulations and/or lease notices as necessary for the proper protection and conservation of the resources associated with the lease issuances.

III. PROTEST ANALYSIS

Protest Summary: WEG and MEIC submitted a timely protest (via fax) dated October 16, 2017, to the inclusion of 204 parcels identified in Appendix A (Enclosure 3) in the MCFO, December 12, 2017, Notice of Competitive Oil and Gas Lease Sale.

Protest Contentions and BLM Response:

1. Legal Requirements of NEPA

A. The BLM Fails to Analyze the Impacts of Horizontal Drilling and Hydraulic Fracturing for the Wells in Big Horn County

The underlying Miles City Field Office RMP and accompanying Final EIS, issued in 2015, relies on a reasonably foreseeable development scenario ("RFD") to quantify the impacts from oil and gas development. The RFD categorizes Big Horn County as an area with medium development potential. *See* EA, App'x C, at 259. However, the BLM has recently approved three Application Permits to Drill ("APDs") in Big Horn County, all of which have used or will use hydraulic fracturing and horizontal drilling to reach a shale formation at 12,000+ feet. *See* Exhibit I, *Comment Letter from WildEarth Guardians re: APDs for Shale Oil in Big Horn County and Other Adjacent Areas* (Oct. 6, 2017). Although the current RMP does anticipate some drilling activity in Big Horn County, it does not analyze federal oil shale development that may occur. *See* Miles City FO RMP at 4-260 (Federal oil shale leasing would not likely occur in either the short or the long-term because economically mineable deposits of oil shale are not known to exist within the planning area."). Thus, the BLM must analyze the increased on-the-ground impacts

from developing any parcels in Big Horn County and adjacent areas which may contain this formation.

Because of fracking and horizontal drilling, shale plays once thought to be uneconomical, are now being drilled. With this increase in development comes increased impacts to air, climate, water, and land. For example, according to the EPA, between 2002 and 2006, oil and gas "[p]roduction emissions [for VOCs, NO_x, CO, SO₂, and PM₁₀] in Montana increased by almost 75 percent," and this trend is likely to continue, See EPA Region 8, *An Assessment of the Environmental Implications of Oil and Gas Production: A Regional Case Study* at 3-6 (2008), <https://archive.epa.gov/sectors/web!pdf/oil-gas-report.pdf>. In Big Horn County, the BLM has approved three fracking wells as of 2017, and based on expressions of interest in the area, more wells are likely to come. Thus, development in this area is likely to be greater than what the RMP estimates, and the BLM must analyze these increased impacts from fracking and horizontal drilling at a minimum at the leasing stage. Indeed, the RMP estimated that only 36 oil wells would be drilled in Big Horn County between 2011 and 2030. See Miles City FO RMP, Mineral App'x at MIN-91, available at <https://eplanning.blm.gov/epl-front-office/projects/lup/59042/97954/11895/66MinAppdx.pdf>.

The BLM cannot ignore the increased impacts that will result from new development in this area by relying on the outdated analysis in the RMP. The BLM must either analyze these impacts in the EA for the December lease sale or amend the RMP to account for these changes.

BLM Response:

Surface disturbance and on-the-ground development are not part of the proposed action. Analyzing on-the-ground impacts is outside the scope of the leasing EA. In addition, at the time of this review it is unknown whether or not a particular parcel will be sold and a lease issued. It is also unknown when, where, or if future well sites, roads, and facilities might be proposed. If development were to occur, additional mitigation would be included as COA on the APD or SN. Detailed site-specific analysis and mitigation of activities associated with any particular lease would occur when a lease holder submits an APD. This would include re-evaluating impacts to human health and safety in respect to the proposed action, and applying drilling conditions of approval.

The 2015 Miles City Field Office RMP did a robust analysis of potential impacts from horizontal drilling and hydraulic fracturing at the field office level, using an up-to-date, reasonably foreseeable development scenario (RFD). Due to the fact that there are no ground-disturbing activities authorized at the leasing stage, it is appropriate to reference/tier to the RMP level effects analysis, and to state that additional site-specific analysis will be completed if/when an APD is received. At this point, the analysis would include information about well locations, well bores, drilling plans, etc. that are not known at the leasing stage.

The 2015 MCFO FEIS describes the following requirements to mitigate impacts from drilling and hydraulic fracturing:

Before hydraulic fracturing takes place, all surface casing and some deeper, intermediate zones are required to be cemented from the bottom of the cased hole to the surface in accordance to Onshore Oil and Gas Order No. 2, MBOGC [Montana Board of Oil and Gas Conservation] rules and regulations, and API [American Petroleum Institute] standards. The cemented well is pressure tested to ensure there are no leaks and a cement bond log is run to ensure the cement has bonded to the casing and the formation. The MBOGC regulations require new and existing wells, which will be stimulated by hydraulic fracturing, must demonstrate suitable and safe mechanical configuration for the stimulation treatment proposed. FEIS at 3-105.

To ensure that drilling and completion operations are conducted in a safe and environmentally sound manner, the BLM approves and regulates all drilling and completion operations, and related surface disturbance associated with Federal and Indian oil and gas mineral development. Operators must submit APDs to the agency in accordance to Onshore Oil and Gas Order No.1. Prior to approving an APD, the BLM identifies all potential subsurface formations that will be penetrated by the wellbore. FEIS at 3-102.

This includes groundwater aquifers and any zones that would present potential safety or health risks that may need special protection measures during drilling, or that may require specific protective well construction measures. All well casing and cementing operations that occur on Federal/Indian lands would be reviewed and approved by BLM and conducted in accordance with the applicable requirements specified in Onshore Oil and Gas Order No. 2 and the American Petroleum Institute (API) standards. FEIS at 3-102.

Benefits of horizontal drilling also include avoidance of sensitive or inaccessible surface features (resulting in greater protection of sensitive environments), multiple wells drilled from the same well pad, and wellbore exposure to a far greater surface area of hydrocarbon-bearing rock when compared to a typical vertical well. Horizontal wells tend to produce more than vertical wells since there is more reservoir rock exposed. This technology also eliminates the need to drill as many wells, since a horizontal well would be capable of producing the oil and gas from a larger areal extent. FEIS at 3-103.

Water produced during drilling, hydraulic fracturing, and completion operations is contained in a lined pit or in steel tanks on location. The water can be disposed of by trucking it to an authorized disposal pit, allowing the water in the lined pit to evaporate within required timeframes, through subsurface injection, or treated and reused to drill or complete another well. The disposal of water generated during drilling and completion operations in an injection or disposal well requires permit(s) from the primacy state or USEPA. See the *Fluid Minerals Operations and Procedures Produced Water* section for details on primacy. A NEPA analysis is prepared for all requests concerning disposal of

water generated from federal wells and in accordance to federal and state regulations. FEIS at 3-104.

Before hydraulic fracturing takes place, all surface casing and some deeper, intermediate zones are required to be cemented from the bottom of the cased hole to the surface in accordance to Onshore Oil and Gas Order No.2, MBOGC rules and regulations, and API standards. The cemented well is pressure tested to ensure there are no leaks and a cement bond log is run to ensure the cement has bonded to the casing and the formation.

MBOGC regulations also ensure that all resources including groundwater are protected. The MBOGC regulations require new and existing wells, which will be stimulated by hydraulic fracturing, must demonstrate suitable and safe mechanical configuration for the stimulation treatment proposed. If the operator proposes hydraulic fracturing through production casing or through intermediate casing, the casing must be tested to the maximum anticipated treating pressure. FEIS at 3-105.

B. The BLM's Reasonably Foreseeable Development Scenario is Not Accurate.

While we appreciate BLM attempts to disclose the reasonably foreseeable direct and indirect greenhouse gas emissions resulting from development of the proposed leases, *see* EA at 48, 50. The agency's reasonably foreseeable development numbers appear grossly underestimated and completely unrealistic, and the BLM fails to correct this issue in its final EA.

The BLM estimates that out of 204 parcels, only 25 wells will be developed, *See* EA at 48, 259-60 (Appendix C). BLM's assessment of reasonably foreseeable oil and gas wells is based on an overly simplistic calculation of the percentage of lease acreage within the total acreage of a "potential" area. This is a bizarre method for assessing reasonably foreseeable wells, and we have yet to see this method applied in any other BLM State or Field Office. Given that the point of leasing is to accommodate industry demands to develop oil and gas wells, it is astonishing that the BLM would project such small amount of development resulting from the proposed leases. This raises serious questions over whether the BLM should actually be offering most of the lease parcels for sale in the first place.

In addition, BLM's estimates of reasonably foreseeable development are contradictory to the way BLM has estimated reasonably foreseeable development in other leasing scenarios. Recently in Utah, the BLM presumed that, at a minimum, one well would be developed on every lease parcel offered for sale. *See* Vernal Field Office, December 2017 Competitive Oil and Gas Lease Sale Final Environmental Assessment, App'x D (Sept. 1, 2017), <https://eplanning.blm.gov/epl-front-office/projects/nepa/80165/119135/145398/FEA.pdf>.

The Vernal FO also considered whether the parcel in question was within 2 miles of a well which had produced oil or gas within the past 6 years. *Id.* This approach is more

logical because development does not occur uniformly across certain area, as the BLM is well aware.

In sum, given that the BLM's assessment of reasonably foreseeable direct and indirect greenhouse gas emissions is based on this inadequate reasonably foreseeable development analysis, the EA is insufficient and fails to demonstrate that a FONSI is appropriate.

BLM Response:

The leasing EA and its Appendix C describe the rationale and methodology behind the RFD (Reasonably Foreseeable Development) scenario for this lease sale.

The RFD for this EA (Appendix C) is based on information contained in the RFD developed for the MCFO FEIS [Final Environmental Impact Statement], which contains the number of potential oil and gas wells that could be drilled and produced in the MCFO area, and was used to analyze the potential number of wells drilled for the nominated lease parcels. These well numbers are only an estimate based on historical drilling, geologic data, resource expertise, and current development in the area. A detailed description of the RFD forecast for this EA is found in Appendix C. EA at 36.

The MCFO RFD contains projections of the number of possible oil and gas wells that could be drilled and produced within each of the three development potential areas specified as high, medium, and low potential areas. GIS [Geographic Information System] was used to determine the number of projected new federal wells within each development potential by taking into consideration the same assumptions and methodology used to determine the MCFO RFD. To project the number of Federal wells on the nominated acres, the proportionate percentage of nominated lease acres within the high, medium, or low potential RFD area is multiplied by the respective total number of high, medium, or low potential projected wells. Where the number of wells in a parcel within a county had a projection of equal to or greater than 1 in 1000 (0.001) the well number was rounded up to one, if the number of wells projected in a parcel within a county had a projection of less than 1 in 1000 (.001) the well number was rounded to zero. EA at Appendix C.

These well numbers are only an estimate based on the MCFO RFD which is based on USGS assessments, past and current development, resource expertise, and MBOGC [Montana Board of Oil and Gas Conservation] feedback and data, and may change in the future if new technology is developed or new fields and formations are discovered. EA at Appendix C.

High Potential

The 1,519 lease parcel acres located in Powder River County are in the area of High Potential (6,043,000 acres total) development. The RFD scenario forecasts up to 1,711 oil wells and 2,009 gas wells in this development area. The projection for federal wells is up

to 209 oil wells and 472 gas wells. The High Potential lease parcels total approximately 1630 acres, approximately 0.0270 percent of the High Potential project area identified in the RFD.

Medium Potential

The 12,136 lease parcel acres located in Big Horn, Fallon and Rosebud Counties are in the area of Medium Potential (6,655,000 acres total) development. The RFD scenario forecasts up to 1,100 oil wells and 1,290 gas wells in this development area. The projection for federal wells is up to 180 oil wells and 258 gas wells. The Medium Potential lease parcels total approximately 16,419 acres, approximately 0.2467 percent of the Medium Potential project area identified in the RFD.

Low Potential

The 55,649 lease parcel acres located in Garfield, Fallon, Custer and Carter Counties are in the area of Low Potential (13,120,000 acres total) development. The RFD scenario forecasts up to 650 oil wells and 764 gas wells in this development area. The projection for federal wells is up to 157 oil wells and 156 gas wells. The Low Potential lease parcels total approximately 67,002 acres, approximately 0.5107 percent of the Low Potential project area identified in the RFD. EA Appendix C.

Table C-1. Nominated Lease Parcel Acres Offered within each County by Alternative

Alternative	Powder River	Carter	Custer	Fallon	Garfield	Big Horn	Rosebud
Alt A	0	0	0	0	0	0	0
Alt B	1,519	669	45,350	9,109	1,486	8,918	2,251

Table C-2. Projected Number of Wells within each County by Alternative

Alternative	Powder River	Carter	Custer	Fallon	Garfield	Big Horn	Rosebud
Alt A	0	0	0	0	0	0	0
Alt B	1 gas well	1 gas well	5 gas wells	2 oil wells	1 oil well	4 gas wells	1 gas well

EA Appendix C

C. The BLM fails to Comply with NEPA's Tiering Requirements and Requirements for Site-Specific Analysis.

According to the council on Environmental Quality's NEPA regulations,

Whenever a broad environmental impact statement had been prepared and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action.

40 C.F.R. § 1502.20.

Here, although the BLM generally does a good job at summarizing the broader FEIS from the RMP and then discussing the site-specific impacts from the lease sale, the BLM's discussion of the cumulative impacts from Alternative B (the proposed alternative) fails to meet the required standard set out in 40 C.F.R. § 1502.20. *See* EA at 59. The BLM must first summarize the issues addressed in the broader EPA document and then concentrate on the issues specific to the subsequent action." *Id.* BLM's discussion in the EA does not summarize the cumulative impacts from the FEIS and does not address any issues specific to the proposal to lease 204 parcels for oil and gas development. Instead, the EA incorporates the EIS by reference **in a short, three-sentence paragraph and defers any analysis of the cumulative impacts to the APD stages**. This section is wholly lacking in any substantive analysis. The BLM's failure to incorporate any meaningful discussion of the cumulative impacts of the proposal to lease is a clear violation of the requirements and spirit of NEPA.

The BLM responds to this argument noting that CEQ guidance directs agencies to "eliminate repetitive discussions of the same issues." 40 C.F.R. § 1502.20. But, the CEQ regulations do not require that federal agencies eliminate repetitive discussions at the expense taking a "hard look" at the project level. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D. Colo. 2014) ("The EA, while typically a more concise analysis than an EIS, must still evaluate the need for the proposal, alternatives as required by NEPA section 102(2)(E), and the environmental impacts of the proposed action and alternatives"). Indeed, NEPA requires that a cumulative impacts analysis include "a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the project, are thought to have impacted the environment." *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005). As shown by the section below, numerous lease sales are occurring across the West, including multiple sales in Montana each year. The BLM must look at the cumulative impacts specific to the project instead of relying on the broad, programmatic analysis in the RMP.

Furthermore, to the extent that the BLM relies on a NEPA analysis at the Application Permit to Drill (“APD”) stage, this approach is also flawed. First, “NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment.” *US Bureau of Land Management v. Kern*. 284 F.3d 1062, 1072 on (9th Cir. 2002). This is especially the case if postponing analysis results in a piecemeal look at the impacts. Second, because leasing conveys a right to develop, absent any stipulations that provide the agency with authority to constrain and even prevent future development to limit greenhouse gas or climate impacts, the BLM has no basis to assert that it is appropriate to wait to conduct its legally required analysis under NEPA, or worse, assert that there would be no reasonably foreseeable emissions associated with its proposed action. Clearly, BLM's short reference to RMP to fulfill its responsibility to analyze cumulative impacts at the leasing stage is completely inadequate under NEPA.

On top of this, the Montana BLM has approved APDs via categorical exclusions in the past. For example, the Miles City Field Office approved a permit to drill a horizontal well on the Fort Peck Indian Reservation on September 23, 2016 through a categorical exclusion. Exhibit 2, BLM, Categorical Exclusion for the Fort Worth Operating Company LLC Permit to Drill the Clark Farms #29-10 (Sept 26, 2016), https://eplanning.blm.gov/epl-front-office/projects/nepa/67755/86866/104072/CX_FortWorth_Indian29_10_29N_50E_APD.pdf.

This means any commitment to address the greenhouse gas emissions of development of the proposed leases through subsequent NEPA is, at best, hollow, and at worst, a deliberate attempt to avoid accountability to addressing potentially significant environmental impacts under NEPA.

BLM Response:

The 2015 Miles City Field Office RMP did a robust analysis of cumulative impacts at the field office level, using an up-to-date reasonably foreseeable development scenario (RFD). Due to the fact that there are no ground-disturbing activities authorized at the leasing stage, it is appropriate to reference/tier to the RMP level cumulative effects analysis, and to state that additional site-specific analysis will be completed if/when an APD is received; at this point, the analysis would include information about well locations, any roads or ancillary facilities, etc. that are not known at the leasing stage.

D. The BLM Fails to Fully Analyze and Assess the Cumulative Impacts of Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Parcels.

Unfortunately, as mentioned above, the agency also completely fails to discuss the cumulative climate impacts from the similar actions occurring from BLM lease sales in the Rocky Mountain region as required by NEPA.

NEPA requires an agency to analyze the impacts of “similar” and “cumulative” actions in the same NEPA document in order to adequately disclose impacts in an EIS or provide

sufficient justification for a FONSI in an EA. See 40 C.F.R. 1508.25(a)(2) and (3). Here, the BLM's development within Montana, as well as throughout the Rocky Mountain West. *See* EA at 59. Additionally, a review of the underlying Final EIS prepared for the Miles City Field Office's Resource Management Plan, shows that the BLM completely omits an assessment of cumulative greenhouse gas emissions associated with oil and gas development, BLM, *Miles City Field Office RMP: Chapter 4, Environmental Consequences* 4-3 (Sept. 21, 2015). <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=79235>

The need to take into account "similar" and "cumulative" actions is underscored by the fact that the BLM acknowledges that the proper geographic area for analyzing and assessing the impacts of greenhouse gas emissions is on a national scale. *See* EA at 47. Although this assessment was apparently prepared to try to mislead the public into believing that emissions from the proposed leasing are not significant ("this estimated quantity [of GHG emission] represents approximately 0.0005% of total U.S. GHG emissions reported in 2015," EA at 47). It actually emphasizes the need for the BLM to not simply account for emissions from the proposed leasing, but likely for all greenhouse gas emissions associated with BLM-approved oil and gas leasing nationwide. Indeed, the BLM cannot claim that emissions are insignificant in the context of state or national emissions, but then fail to disclose the direct, indirect, and cumulative greenhouse gases that would result from all other "similar" and "cumulative" actions within a statewide or national scope. The failure to do so renders the EA inadequate and fails to provide support for a FONSI.

In addition, in its response to Guardians comments on the draft EA, the BLM completely misses the point. *See* EA at 282. The agency discusses its analysis on downstream greenhouse gases from combustion to claim that it fulfill its duty to analyze cumulative greenhouse gas emissions. Although Guardians appreciates that the BLM has estimated emissions from downstream combustion, this does not address BLM's duty to analyze the cumulative impacts of similar actions with common timing and geography. As a result, the EA remains inadequate to support the lease sale, and the BLM's FONSI cannot stand.

BLM Response:

The leasing EA tiers to the air resource and climate change analysis in the 2015 MCFO Resource Management Plan (RMP) and Final Environmental Impact Statement (FEIS), in accordance with 40 C.F.R. § 1502.20.

The direct, indirect, and cumulative impacts from oil and gas development on air resources were analyzed in Chapter 4 of the MCFO Proposed RMP and FEIS. Detailed information on estimated greenhouse gas (GHG) emissions can be found in the Air Resource Technical Support Document (ARTSD) for Emission Inventories, Near-Field Modeling, and Visibility Screening, October 2014. Estimated greenhouse GHG emissions attributable to projected oil and gas development

within the planning area are disclosed in both of these documents. In addition, an estimate of GHGs from the consumption of potentially produced oil and gas is included in the EA.

In addition, Table 14 on page 50 of the EA shows an estimate of potential downstream GHG emissions using reasonable projections and assumptions. In this analysis it was assumed that 100 percent of oil and gas produced from the parcels included in Alternative B would be attributed to fossil fuel combustion within the United States for residential heating and electricity. Average oil and gas production rates for each county were obtained from the Montana Department of Natural Resources and Conservation (DNRC) – Montana Board of Oil and Gas Conservation (MBOGC). Estimated emissions of GHGs based on RFD potential are used as a proxy for assessing potential climatic effects.

The BLM followed established procedures for analyzing GHGs as prescribed in guidance available at the time of the analysis, including The Council on Environmental Quality's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, August 2016, and the BLM's associated Permanent Instruction Memorandum No. 2017-003, January 2017.

The BLM acknowledges that the estimated increase in GHG emissions, based on projected development, may contribute to an increase in global atmospheric GHG concentration which may result in exacerbating impacts associated with global climate change. However, the BLM is not able to predict actual local impacts from the projected level of increased GHG emissions associated with the proposed lease sale. The application of stipulation CSU 12-23 and lease notice LN 14-18 (see below) to the proposed lease parcels will provide for conservation of air resources by ensuring that reduced emissions engine technology is used as the leases are developed, and by allowing the BLM to conduct additional air analyses at the time of development if methodologies become available to determine local impacts of project level GHG emissions.

CSU 12-23- Controlled Surface Use Stipulation- Air Resources

Surface occupancy and use is subject to the requirement that each diesel-fueled non-road engine with greater than 200 horsepower design rating to be used during drilling or completion activities meets one of the following two criteria: (1) the engine was manufactured to meet USEPA NO_x emission standards for Tier 4 non-road diesel engines, or (2) the engine emits NO_x at rates less than or equal to USEPA emission standards for Tier 4 non-road diesel engines. EA at 191.

LN 14-18- Lease Notice- Air Resource Analysis

The lessee/operator is given notice that prior to project-specific approval, additional air resource analyses may be required in order to comply with the NEPA, FLPMA, and/or other applicable laws and regulations. Analyses may include equipment and operations information, emission inventory development, dispersion modeling or photochemical grid modeling for air quality and/or air quality related value impact analysis, and/or emission

control determinations. These analyses may result in the imposition of additional project-specific control measures to protect air resources. EA at 192.

E. The BLM Fails to Analyze the Costs of Reasonably Foreseeable Carbon Emissions Using Well-Accepted, Valid, Credible, GAO-Endorsed, Interagency Methods for Assessing Carbon Costs.

In addition to a lack of cumulative impacts analysis, it is particularly disconcerting that the agency continues to dismiss the benefits of using the social cost of carbon protocol, a valid, well-accepted, credible, and interagency endorsed method of calculating the costs of greenhouse gas emissions and understanding the potential significance of such emissions, while simultaneously discussing the revenues generated by the lease sale bonus bids and rental rates once development occurs. *See* EA at 57 58.

The social cost of carbon protocol for assessing climate impacts is a method for "estimat[ing] the economic damages associate with a small increase in carbon dioxide (CO₂) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO₂ reduction)." Exhibit 1 to WildEarth Guardians' August 10, 2017 Comments. The protocol was developed by a working group consisting of several federal agencies.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. *See* Exhibit 2, to WildEarth Guardians' August 10, 2017 Comments. These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies. *See* Exhibit 3, to WildEarth Guardians' August 10, 2017 Comments. This report and the social cost of carbon estimates were again revised in 2015. *See* Exhibit 4, to WildEarth Guardians' August 10, 2017 Comments. Again, this report and social cost of carbon estimates were revised in 2016. *See* Exhibit 5, to WildEarth Guardians' August 10, 2017 Comments.

Most recently, as an addendum to previous Technical Support Documents regarding the social cost of carbon, the Department of the Interior joined numerous other agencies in preparing estimates of the social cost of methane and other greenhouse gases. *See* Exhibit 6, to WildEarth Guardians' August 10, 2017 Comments.

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from \$10 to \$212 per metric ton of carbon dioxide. *See* chart below. In one of its more recent update to the Social Cost of Carbon Technical Support Document, the White House's central estimate was reported to be \$36 per metric ton. Exhibit 7 at 4. Currently, however, the central estimate is reported to be \$50 per metric ton, a value that experts have found to be the best estimate of the social cost of greenhouse gases" and that experts have urged government officials to consider in their analyses, *See* Exhibit 7, to WildEarth Guardians' August 10, 2017 Comments.

In July 2014, the U.S. Government Accountability Office ("GAO") confirmed that the Interagency Working Group's estimates were based on sound procedures and methodology. See Exhibit 8, to WildEarth Guardians' August 10, 2017 Comments.

Although often utilized in the context agency rulemakings, the protocol has been recommended for use and has been used in project-level decisions. For instance, the EPA recommended that an EIS prepared by the U.S Department of State for the proposed Keystone XL oil pipeline include "an estimate of the 'social cost of carbon' associated with potential increases of GHG emissions." Exhibit 9, to WildEarth Guardians' August 10, 2017 Comments.

More importantly, the BLM, including the neighboring Billings Field Office, has also utilized the social cost of carbon protocol in the context of oil and gas approvals. In other recent Environmental Assessments for oil and gas leasing in Montana, the Billings Field Office estimated "the annual SCC [social cost of carbon] associated with potential development on lease sale parcels," Exhibit 10, to WildEarth August 10. 2017 Comments. In conducting its analysis, the BLM used a "3 percent average discount rate and year 2020 values." presuming social costs of carbon to be \$46 per metric ton. *Id.* Based on its estimate of greenhouse gas emissions, the agency estimate total carbon costs to be "\$38.499 (in 2011 dollars)." *Id.* In Idaho, the BLM also utilized the social cost carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3 percent average discount rate and year 2020 values, the agency estimated the cost of carbon to be \$51 per ton of annual CO₂e increase. See Exhibit 11, to WildEarth Guardians' August 10, 2017 Comments. Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be \$3,689,442 annually. *Id.* at 83.

The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

Id. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be increased six times for a mid-range value of per ton. See Exhibit 12, to WildEarth Guardians' August 10. 2017 Comments. In spite of uncertainty and likely underestimation of carbon costs, nevertheless, the SCC is a useful measure to assess the benefits of CO₂ reductions," and thus a useful measure to assess the costs of CO₂ increases. Exhibit 1.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decision making, is emphasized by a recent White House report, which warned that delaying carbon

reductions would yield significant economic costs. See Exhibit 13, to WildEarth Guardians' August 10, 2017 Comments. As the report states:

[D]elaying action to limit the effects of climate change is costly. Because CO₂ accumulates in the atmosphere, delaying action increases CO₂ concentrations. Thus, if a policy delay leads to higher ultimate CO₂ concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO₂ concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO₂ concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and is specifically supported in federal case law. Courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id.* at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id.* at 1200. The court found this argument to be arbitrary and capricious. *Id.* The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id.* at 1202.

More recently, a federal court has done likewise for a federally-approved coal lease. There, the court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. See *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D Colo. 2014) (citing 40 C.F.R., § 1502.23). However, when an agency prepares a cost-benefit analysis, "it cannot be misleading," *Id.* at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project, but the quantification of benefits of the project, but the quantification of the social cost of carbon although included in earlier analyses was omitted in the final NEPA analysis. *Id.* at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id.* Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country, *Id.* Furthermore, the court reasoned that even if the agency had decided that the social cost of carbon was irrelevant, the agency must still provide "justifiable reasons for not using (or

assigning minimal weight to) the social cost of carbon protocol " *Id.* at 1193 (emphasis added).

In August, a federal district court in Montana cited to the *High Country* decision and reaffirmed its reasoning, rejecting a NEPA analysis for a coal mine expansion that touted the economic benefits of the expansion without assessing the carbon costs that would result from the development. *See Mont. Env'tl. Info. Ctr. V. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM (D. Mont. Aug. 14, 2017).

In its response to comments, the BLM goes out of its way to argue that its discussion of revenue from the lease sales is not an "economic benefit" because the agency does not call it that. This argument rails because it is circular and contrary to the *High Country* decision. First, the argument is circular because the BLM argues that "nowhere in this EA does the BLM refer to the potential revenue associated with this lease sale as an economic benefit since that would be inaccurate since a cost-benefit analysis was not conducted." But, this is precisely Guardians' point. The agency has not included a full cost-benefit analysis because it has only included the benefits. And, it does not matter whether the BLM labels its analysis an "economic benefit analysis." If the agency includes a discussion of the revenue from development of oil and gas, this discussion cannot occur without disclosure of the other side of the coin—the social costs from releasing more carbon into the atmosphere. Second, this conclusion is unscored by the court's conclusion in *High Country*. There, the court specifically ruled that when a final EIS "weighed several specific economic benefits recovered, payroll, associated purchases of supplies and services, and royalties" without disclosing the social cost of carbon, the agency's analysis was arbitrary and capricious. *High Country*, 52 F.Supp. at 1190 (emphasis added). The BLM cannot avoid this decision by claiming that its extensive analysis of the bonus bids and rental revenue from the lease is not an "economic benefit."

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. See Exhibit 14, to WildEarth Guardians' August 10, 2017 Comments. Just this year, the Proceedings of the National Academy of Sciences of the United States of America ("PNAS"), acknowledged in a peer-reviewed article from February of this year that the social cost of carbon analysis is "[t]he most important single economic concept in the economics of climate change," and that "federal regulations with estimated benefits of over \$1 trillion have used the SCC." Exhibit 15, to WildEarth Guardians' August 10, 2017 Comments.

Clearly, the social cost of carbon provides a useful, valid, and meaningful tool for assessing the climate consequences of the proposed development, and the BLM's dismissal of the value of this protocol while simultaneously discussing the benefits of oil and gas development is arbitrary and capricious. While we do not suggest that a comprehensive cost-benefit analysis is required, the fact that economic benefits are touted in the EA indicates that costs and benefits are useful for assessing the significance of the

proposed development. To this end, the BLM must disclose carbon costs in order to fully assess the significance of climate impacts and support any FONSI.

BLM Response:

As previously stated in the response to comments there are different approaches that an agency can take to examine climate impacts associated with greenhouse gas emissions, with the social cost of carbon estimates being just one metric that could be used. The BLM examined the possible use of social cost of carbon/greenhouse gas estimates and determined to use a different approach for this EA that quantified greenhouse gas emissions as the common metric used to compare across alternatives and then qualitatively discussed potential climate impacts. The BLM took this approach for several reasons. First, climate change and potential climate impacts, in and of themselves, are often not well understood by the general public (Etkin and Ho 2007, National Research Council 2009a). This is in part due to the challenges associated with communicating about climate change and climate impacts, stemming in part from the fact that most causes are invisible factors (such as greenhouse gases) and there is a long lag time and geographic scale between causes and effects (National Research Council 2010). Research indicates that for difficult environmental issues such as climate change, most people more readily understand if the issue is brought to a scale that is relatable to their everyday life (Dietz 2013); when the science and technical aspects are presented in an engaging way such as narratives about the potential implications of the climate impacts (Corner, Lewandowsky, Phillips, and Roberts 2015); use examples and make information relevant to the audience while also linking the local and global scales (National Research Council 2010). In order to more effectively convey the potential climate impacts, the BLM quantified greenhouse gas emissions as a common metric to compare across alternatives and discussed narratively the climate related impacts in Section 3.2.2. This approach presents the data and information in a manner that follows many of the guidelines for effective climate change communication developed by the National Academy of Sciences (National Research Council 2010) by making the information more readily understood and relatable to the decision-maker and the general public. The projected climate impacts to the regional area that covers the parcels offered for lease provides a narrative in a scale that is more relevant to the decision-maker and the general public since it provides more detailed specifics on potential implications to their everyday life--such as warmer temperatures and less snowfall, more frequent more severe droughts, and increased chance of stressed ecosystems, etc.

This regional discussion does not discount the quantified greenhouse gas emissions nor the qualitative discussions of global, US and state level impacts, but provides a meaningful and engaging way to connect the reader to more relevant impacts that then allow them to make the connections to the state, US and global impacts. The approach taken by the BLM for this EA to discuss climate change provides impacts at several scales whereas the social cost of carbon metric only provides an impact metric at the global scale. This limits the usefulness for the decision-maker given the lack of information on more localized impacts.

Second, as articulated in the response to comments the economic impact analysis conducted as part of this lease sale EA assessed potential federal revenues that could be collected from bonus bids and annual rental payments on nominated parcels leased in this upcoming lease sale.

Revenues associated with leasing these parcels would stimulate economic activity as these dollars are disbursed and/or spent, and the resulting economic impacts of these dollars are analyzed and expressed in terms of their effect on employment; personal income; or economic output in the economic analysis of oil and gas development in the MCFO Final EIS 2015 regional economic impact analysis. Economic impact analyses, such as was done for the MCFO Final EIS 2015, describe effects that agency activities may have on economic conditions and local economic activity, generally expressed as projected changes in employment, labor income, and economic output (Watson, Wilson, Thilmany, and Winter 2007). It is important to note that results from an economic impact analysis should not be considered as benefits or costs (Watson et al. 2007).

Whereas an economic impact analysis evaluates changes in economic activity, a cost-benefit analysis is an approach used to determine economic efficiency by focusing on changes in social welfare by comparing whether the monetary benefits gained by people from an action/policy are sufficient in order to compensate those made worse off and still achieve net benefits (Watson et al. 2007, EPA 2010, Kotchen 2011). To summarize, cost-benefit analyses and regional economic impact analyses are very different methods that are focused on quantifying/monetizing different measures (social welfare and economic activity respectively) and are based upon differing assumptions and terminology and are not interchangeable. Furthermore, Watson et al. (2007) explicitly stated that an economic impact does not equate to any measure of net welfare change and that an economic impact analysis is not the same as a benefit-cost analysis, and the term ‘economic benefit’ should be used only in the context of cost-benefit analysis. As such, nowhere in this EA does the BLM refer to the potential revenue associated with this lease sale as an economic benefit since that would be incorrect since a cost-benefit analysis was not conducted. Consequently, the increased economic activity, discussed in terms of revenue, employment, labor income, total value added, and output are simply the economic impacts associated with the alternatives. People, based upon their views and values, may perceive this increased economic activity as a ‘positive’ impact that they desire to have occur; however, that is very distinct from being an “economic benefit” as defined in economic theory and methodology (Watson et al. 2007, Kotchen 2011). Additionally, another person may perceive increased economic activity as a ‘negative’ impact due to potential in-migration of new people, competition for jobs, and concerns that newcomers will change the sense of community and community qualities that are important to herself/himself. Therefore, it is critical to distinguish that how people may perceive an economic impact is not the same as, nor should be interpreted as, a cost or a benefit as defined in a cost-benefit analysis.

Furthermore, the court in *High Country Conservation Advocates, et al. v. United States Forest Service*, 52 F. Supp. 3d 1174 (D. Colo. 2014) did not order the agency to use the Social Cost of Carbon protocol. Rather, the Court held that the agency did not offer non-arbitrary reasons why the quantification of the lease modifications’ contribution to the social cost of carbon were abandoned in the FEIS. The Court determined that the agency did not demonstrate that it took a “hard look” at whether using the Social Cost of Carbon protocol should not have been included in the FEIS when the protocol was included in the DEIS (*Id.* at 1191-1192).

Moreover, a recent Executive Order (EO) entitled, “Promoting Energy Independence and Economic Growth,” issued March 28, 2017, directed that the Interagency Working Group (IWG) be disbanded and that technical documents issued by the IWG on social costs of carbon be withdrawn as no longer representative of governmental policy (Section 5 of the EO).

Finally, protesters have provided no information as to how presenting GHG emissions in a singularly monetary fashion without accounting for the cost from not developing these minerals in the context of FLPMA’s mandate to provide for the nation’s energy needs, provides information BLM has not already considered in disclosing the expected impacts from climate change and GHGs resulting from the offering of parcels for sale. Without any other monetized benefits or costs reported, monetized estimates of the SCC would be presented in isolation, without any context for evaluating their significance. This limits the usefulness of such estimates to the decision maker. The approach taken for this EA provides quantitative GHG emissions as a common metric across alternatives and qualitatively discusses climate impacts, thus effectively informing the decision-maker and the public of potential climate impacts at global, US, state, and regional scales. This approach allows the BLM to meet the “hard look” requirement by presenting the environmental impacts of the proposal and the alternatives in comparative form (quantified greenhouse gas emissions), and discusses cumulative climate impacts, providing for the definition of issues and environmental consequences ensuring that an informed decision can be made.

IV. CONCLUSION

The Protesters requested that the BLM withdraw 204 parcels from the MCFO, December 12, 2017, Competitive Oil and Gas Lease Sale. The Protesters contend that the BLM failed to analyze the impacts of horizontal drilling and hydraulic fracturing for wells in Big Horn County, fails to comply with NEPA’s tiering requirements and requirements for site-specific analysis, fails to fully analyze and assess the cumulative impacts of GHG emissions that would result from issuing the proposed leases parcels, fails to analyze the cost of reasonably foreseeable carbon emissions using well-accepted, valid, credible, GAO-endorsed interagency methods, and that the RFD is not accurate.

The BLM dismisses this protest for the reasons stated above.

The BLM, in accordance with existing regulations and policies, will not defer leasing actions and will offer for lease all 204 of the protested parcels described in the MCFO, December 12, 2017, Notice of Competitive Oil and Gas Lease Sale.

Administrative Review and Appeal

This Decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 C.F.R. § 4 and Form 1842-1 (Enclosure 2). If an appeal is taken, the Notice of Appeal must be filed in the Montana State Office at the above address within 30 days from receipt of this Decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition for a stay of the effectiveness of this Decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay must show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for stay must be submitted to the IBLA and the appropriate Office of the Solicitor (see 43 C.F.R. § 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall be evaluated based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of immediate and irreparable harm if the stay is not granted; and
4. Whether the public interest favors granting the stay.

Sincerely,

/s/Donato J. Judice

Donato J. Judice
Deputy State Director
Energy, Minerals, & Realty

2 Enclosures

- 1- WEG and MEIC Protest Letter Dated October 16, 2017 (36 pp)
- 2- Form 1842-1 (2 pp)